## ABSTRACT OF THE DISCLOSURE

In a method for marker-less navigation of a medical instrument in preoperative 3D images using an intraoperatively acquired 3D C-arm image, an intraoperative 3D Image Is acquired with a C-arm system, the medical instrument brought into registration with regard to the intraoperative 3D image D, whereby a registration matrix MDN is obtained. The intraoperative 3D image is brought into registration with regard to an existing preoperative 3D image by means of image-based registration, whereby a registration matrix Is obtained. Navigation of the medical instrument in the preoperative 3D image can then proceed.

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